

Appl. No. 10/714,497
Amdt. Dated September 29, 2005
Reply to Office Action of June 30, 2005

Attorney Docket No. 81784.0293
Customer No.: 26021

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A semiconductor device manufacturing method, comprising:

a first step of forming a laminated structure by adhering, on a semiconductor substrate including a plurality of integrated circuits, a carrier member covering a region in which the plurality of integrated circuits are formed, with an insulating resin interposed between the semiconductor substrate and the carrier member;

a second step of ~~cutting on the laminated structure so as to cut~~ the semiconductor substrate together with the insulating resin using a dicing saw while allowing at least a portion of the carrier member to remain uncut; ~~and~~

a third step of ~~dividing the laminated structure by cutting the carrier member; wherein~~ forming metal wiring on a machined surface created in the second step; and

a fourth step of dividing the laminated structure by cutting the carrier member; wherein

the second step is performed while cooling a dicing saw used to cut into the laminated structure including the semiconductor substrate the dicing saw and a cutting portion to be maintained at a temperature lower than the softening temperature of the insulating resin.

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2. (Currently Amended): A semiconductor device manufacturing method as defined in claim 1, wherein the second step is performed while the cooling is executed by spraying a coolant on the dicing saw and the cutting portion.

3. (Original): A semiconductor device manufacturing method as defined in claim 2, wherein the second step includes spraying the coolant on the dicing saw along a rotating direction of the dicing saw at an angle of elevation of between 5° and 45° , inclusive.

4. (Original): A semiconductor device manufacturing method as defined in claim 2, wherein the second step includes spraying the coolant with a spraying width larger than the width of the dicing saw.

5. (Original): A semiconductor device manufacturing method as defined in claim 2, wherein the coolant used in the second step is obtained by passing tap water through an RO film.

6. (Original): A semiconductor device manufacturing method as defined in claim 2, wherein the second step is performed while the cooling is executed by spraying on the dicing saw a coolant having a pH value of between 4 and 6, inclusive.

7. (Cancelled).